

## Exercise Answers - Project Design Criteria Mainline

Matrix 3 Row 8

This checklist is to confirm interpretation of standards. Your project may require that additional/different/or fewer Design Elements be addressed.

Design Class	P-2, DM fig 440-6 (November 2007)
Functional Class	Rural Principal Arterial (State Route Log)
Design Year	2029
Design Speed	70 MPH, DM fig 440-6 (November 2007)
ADT	14000 ADT – 3000 DHV
Truck Percentage	8%
Right of Way Width	63' from the edge of traveled way, DM fig. 440-6 (November 2007)

<b>DESIGN ELEMENT</b>	<b>Design Level (B/M/F)</b>	<b>Standard</b>	<b>REFERENCE &amp; COMMENTS</b>
<b>Horizontal Alignment</b>	F		
Stopping Sight Distance		730'	DM fig 650-1 (May 2006)
Max. Superelevation		10%	DM 642.04 (November 2005)
<b>Vertical Alignment</b>	F		
Maximum Grade		4%	DM fig 440-6 (November 2007)
Stopping Sight Distance		730'	DM fig 650-1 (May 2006) Deviation #1 is for 660' of stopping sight distance for the vertical curve located at Sta. 112+00 to 120+00
Passing Sight Distance		2480'	DM fig 650-9 (May 2006)
Decision Sight Distance		780'	DM fig 650-10 (May 2006) Rural Stop
<b>Lane Width</b>	F		
Number of Lanes		4	DM fig 440-6 (November 2007)
Lane Width		12	DM fig 440-6 (November 2007)
Turning Roadway Width		Varies	DM fig 641-2a (November 2006)
<b>Shoulder Width</b>	F		
Shoulder Width-Inside		4'	DM fig 440-6 (November 2007)
Shoulder Width-Outside		10'	DM fig 440-6 (November 2007)
<b>Lane Transition</b>	F		
Channelization Tapers		L = VT	DM 620.07 (January 2005)

<b>DESIGN ELEMENT</b>	<b>Design Level (B/M/F)</b>	<b>Standard</b>	<b>REFERENCE &amp; COMMENTS</b>
<b>On/Off Connections</b>	F		
<b>Median Width</b>	F	60'	DM fig 440-6 (November 2007)
<b>Cross Slope Lane</b>	F	2%	DM 640.04 (1) (November 2006)
<b>Cross Slope Shoulder</b>	F	2%	DM 640.04 (3) (November 2006)
<b>Fill/Ditch Slopes</b>	F		
Fill Slopes		Varies	DM fig 640-1 (November 2006)
Ditch In-slopes		6:1	DM fig 640-1 (November 2006)
<b>Access</b>	F	Partial	
<b>Clear Zone</b>	F	Varies	DM fig. 700-1 (May 2006)
<b>Signing</b>	F		DM chapter 820 (November 1999)
<b>Delineation</b>	F		DM chapter 830 (May 2006)
<b>Illumination</b>	F		DM chapter 840 (November 2006)
<b>Basic Safety</b>	Blank		
<b>Bicycles</b>	F		DM chapter 1020 (November 2006)
<b>Pedestrians</b>	F		DM chapter 1025 (May 2006)
<b>Bridges</b>			
<b>Lane Width</b>	F		
Bridge #			
Number of Lanes		4	DM fig 440-6 (November 2007)
Lane Width		12'	DM fig 440-6 (November 2007)
<b>Shoulder Width</b>	F		
Bridge #			
Shoulder Width-Inside		4'	DM fig 440-6 (November 2007)

<b>DESIGN ELEMENT</b>	<b>Design Level (B/M/F)</b>	<b>Standard</b>	<b>REFERENCE &amp; COMMENTS</b>
Shoulder Width-Outside		10'	DM fig 440-6 (November 2007)
<b>Vertical Clearance</b>	F		DM chapter 1120 (January 2005)
Bridge #			
<b>Structural Capacity</b>	F		DM chapter 1120 (January 2005)
Bridge #			
<b>Intersections</b>			
Design Vehicle		WB-50	DM fig. 910-6 (November 2007) WB-50 is the minimum within the project limits
<b>Turn Radii</b>	F		
Intersection Radii - Left		55	
Intersection Radii - Right		55	DM fig 910-11 (November 2007)
<b>Intersection Angle</b>	F	90	DM 910.04 (2)(a) (November 2007)
<b>Intersection Sight Distance</b>	F	Varies	DM fig. 910-22a (November 2007)
<b>Barriers</b>			
<b>Terminals &amp; Transition Sections</b>	F		DM chapter 710 (November 2006)
<b>Standard Run</b>	F		DM chapter 710 (November 2006)
<b>Bridge Rail</b>	F		DM chapter 710 (November 2006)